Abstract

Please add the following Abstract:

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A process meter for measuring at least one physical process variable of a medium stored in a container or flowing in a line, comprising: a transducer including a sensor arrangement providing measurement signals (s_1, s_2), said sensor arrangement having: at least a first sensor providing at least a first measurement signal (s_1) in response to the physical process variable being measured, particularly to changes in the process variable, and at least a first temperature sensor mounted in said transducer for locally sensing a first temperature, T_1, in the transducer, and by means of said at least one temperature sensor, at least a first temperature measurement signal (Θ_1) representing the first temperature, T_1, in said transducer; and meter electronics which, using at least said first measurement signal (s_1) and a first correction value (K_1) for the at least first measurement signal (s_1), derive at least one measured value (X) currently representing the physical variable, wherein: during operation, said meter electronics determine the first correction value (K_1) from a temporal variation of the at least first temperature measurement signal (Θ_1) by also taking into account temperature values sensed in the past by means of said first temperature sensor.--